

material generated from the trenching operation, as approved by the Engineer. Additional backfill material, if needed, shall conform to Select Borrow.

Backfilling shall be completed in two layers with the first layer being placed simultaneously with the drain, holding the drain flush against the side of the pavement. Backfill material shall be compacted using a vibratory shoe compactor.

**307.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for excavation, backfill, compaction, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**307.04.01** Prefabricated Edge Drains and Outlet Pipe will be measured and paid for at the Contract unit price per linear foot.

**307.04.02** Additional backfill material authorized by the Engineer will be measured and paid for at the Contract unit price per cubic yard for Select Borrow Excavation.

## SECTION 308 — EROSION AND SEDIMENT CONTROL

**308.01 DESCRIPTION.** This work shall consist of the application of erosion and sediment control measures throughout the life of the project to control erosion and to minimize the sedimentation in rivers, streams, lakes, reservoirs, bays, and coastal waters as specified in the Contract Documents or as directed by the Engineer.

Erosion and sediment control measures shall be applied to all disturbed areas. In addition, the Contractor shall identify all staging and stockpile areas and apply erosion and sediment control measures as approved by the Engineer and the Maryland Department of the Environment (MDE).

The Contractor shall assign an employee to the project to serve in the capacity of Erosion and Sediment Control Manager (ESCM).

**308.01.01 Standards and Specifications.** The erosion and sediment control measures and devices shall be constructed in conformance with the latest Maryland Standards and Specifications for Soil Erosion and Sediment Control published by the Maryland Department of the Environment, Water Management Administration and all revisions thereof including the additions and modifications specified herein or in the Contract Documents. The Contractor shall keep a copy of the latest

MDE Standards and Specifications for Soil Erosion and Sediment Control on the site at all times.

**308.01.02 Quality Assurance Ratings.** All Administration projects will be inspected by an independent Quality Assurance Inspector assigned to the Construction Inspection Division to ensure compliance with the approved Erosion and Sediment Control Plan. Projects will be inspected biweekly at a minimum and be given one of the following ratings:

**Rating A.** All temporary and permanent design controls are properly installed prior to any earth disturbing activities. Stabilization is provided within the period specified. Corrective actions are taken within 24 hours. Maintenance of controls is significantly above the minimum acceptance standards. Project needs no further attention at the time of inspection. Controls functioned as intended during the last storm. Controls are expected to function adequately during the next storm event. The Contractor exhibits initiative in establishing and maintaining the controls.

**Rating B.** Controls are installed at the proper intervals in conformance with the Contract Documents. Controls are functioning as intended. Stabilization is in conformance with the time specified. Some maintenance may be required. Controls functioned as intended during the last storm, and controls are adequate to handle the next storm event. Corrective actions are taken within 48 hours.

**Rating C.** Controls are installed in conformance with the Contract Documents. Maintenance of controls is in conformance with minimum requirements. Stabilization requirements are being adhered to only when enforced, placing a burden on the controls. There is a good chance of controls failing during the next storm event. Stabilization of disturbed areas needs improvement. Constant monitoring is necessary. Conditions for a shut down could arise quickly.

**Rating D.** Controls are installed, but some are not in conformance with the Contract Documents. Maintenance of more than half of the controls is needed. Stabilization is not within the time specified. Little or no stabilization is being done. The controls will likely fail during the next storm event. The Contractor is not responsive to requests for corrective action. Corrective actions begin after five working days, if at all. Grading and related operations will be shut down by the Administration.

**Rating F.** Some controls have been installed. Installation and stabilization requirements are not in conformance with the Contract Documents. Controls are not maintained. The Contractor does not respond to requests for corrective action. There could easily be a major failure during the next storm event. The entire project will be shut down immediately.

**Shutdowns.** When the first grade of 'C' is given to a project, the Contractor shall make every effort to have all deficiencies corrected within a maximum of five working days. The project will be reinspected at the end of this period. If it is found that the deficiencies have not been satisfactorily corrected, a grade of 'D' will be given and all grading operations will be shut down until the project receives a 'B' rating.

If a consecutive 'C' rating is given for other deficiencies that arise and the original deficiencies were corrected, the Contractor will be alerted that their overall effort is marginal and a grading shut down is imminent if erosion and sediment control efforts do not substantially improve within five working days.

A third consecutive 'C' rating will result in a shut down of grading activities until the project receives a 'B' rating.

When a disregard for correcting these deficiencies is evident, a rating of 'F' will be given and the entire project will be shut down until the project receives a rating of 'B'.

**Noncompliance Penalty.** When a 'D' or 'F' is given to the project by the independent Quality Assurance Inspector, a monetary penalty, in addition to a shutdown, will be assessed for each day the project is in noncompliance. A rating of 'B' is required to suspend the daily monetary penalty and shutdown.

In extreme cases, where degradation to a resource could occur, or if the Contractor is unresponsive to direction to take corrective action, the Administration may elect to have these corrective actions taken by another contractor or by Administration maintenance staff. All costs associated with this work will be billed to the original Contractor in addition to the penalty.

The daily penalty specified in the Contract Documents will be assessed when a rating of 'D' is given. If a rating of 'F' is given, the daily penalty assessed for the 'D' rating will be doubled.

This penalty will be imposed until the project is reinspected and receives a 'B' rating. This penalty will run concurrent with the mandatory shutdowns outlined in the rating criteria.

### 308.02 MATERIALS.

Riprap	901.03
4 to 7 in. Stone	901.05
Hot Mix Asphalt	904
Pipe	905

Gabion Wire	906
Steel Plate	909.02
Welding Material	909.03
Fence Fabric for Super Silt Fence	914.01.01
Seed, Mulch, Fertilizer, Soil Conditioner, Soil Stabilization Matting, and Other Materials for seeding and soil stabilization	920
Straw Bales	921.08
Geotextile, Class as specified	921.09
2 to 3 in. Stone	M 43, No. 2
3/4 to 1-1/2 in. Stone	M 43, No. 4
No. 57 Stone	M 43, No. 57

Soil Stabilization Matting will replace Erosion Control Matting, and Geotextile Class SE will replace Filter Cloth and Geotextile Class C where they appear in the latest Maryland Standards and Specifications for Soil Erosion and Sediment Control.

**308.03 CONSTRUCTION.** Refer to 403.02.01 for excavated material.

**308.03.01 Contractor Responsibilities.** The Contractor shall construct all erosion and sediment control measures in conformance with 308.01.01. The Contractor shall have all control measures inspected and approved by the Engineer and MDE prior to beginning any other land disturbances. The Contractor shall ensure that all runoff from disturbed areas is directed to the sediment control measures. The Contractor shall not remove any erosion or sediment control measure without the approval of the Engineer and MDE. Refer to GP-7.12 for unforeseen conditions.

**308.03.02 Erosion and Sediment Control Plan (E & S Plan) and Sequence of Construction.** The Contractor shall implement the Administration's E & S Plan and Sequence of Construction as approved by MDE. Minor adjustments to the sediment control locations may be made in the field with the approval of the Engineer and MDE. Major revisions, deletions, or substitutions to the E & S Plan will require a formal review and approval by the Administration and MDE. Changes to the approved E & S Plan shall be submitted to the Administration in writing at least 14 days prior to implementing the change. The Contractor shall obtain Administration and MDE approval for changes to the E & S Plan or Sequence of Construction prior to implementing the change.

**308.03.03 Erosion and Sediment Control Manager (ESCM).** At least 10 days prior to beginning any work, the name and credentials of the ESCM shall be submitted to the Engineer for approval. Any substitutes for the ESCM will be subject to the approval of the Engineer. The

substitution shall be timed to ensure that an ESCM is assigned to the project at all times. The Administration reserves the right to request a reassignment of the ESCM duties to another individual for any reason.

The ESCM shall be thoroughly experienced in all aspects of construction and have satisfactorily completed an Erosion and Sediment Control Training Program either conducted or authorized by MDE pursuant to the appropriate article published in the Annotated Code for the State of Maryland. The ESCM shall have primary responsibility and authority for the implementation of the approved erosion and sediment control plans, schedules and methods of operation for both on-site and off-site activities.

The ESCM's duties shall include:

- (a) Inspect the erosion and sediment controls on a daily basis to ensure that all controls are in place at all times and to develop a list of activities and schedules to ensure conformance with the Contract Documents.
- (b) Maintain a daily log of these inspections, including actions taken, and submit a written report to the Engineer at the end of the work day.
- (c) Conduct after storm inspections with the Engineer both during and beyond normal working hours/days and submit a written report to the Engineer.
- (d) Be assigned the authority by the Contractor to mobilize crews to make immediate repairs to the controls during working and nonworking hours.
- (e) When requested, accompany the Engineer on Quality Assurance Inspections and inspections made by the regulating agencies.
- (f) Coordinate with the Engineer to ensure that all corrections are made immediately and that the project is in compliance with the approved plan at all times.

**308.03.04 Schedule.** Within 14 days after the Notice of Award, the Contractor shall submit for approval to the Administration and the MDE, an Erosion and Sediment Control Schedule to implement the E & S Plan. The schedule shall indicate the sequence of construction, implementation and maintenance of controls, temporary and permanent stabilization, and the various stages of soil disturbance. After the schedule is approved by the Administration, it will be forwarded to MDE for approval. The schedule shall include the following:

- (a) Clearing and grubbing of areas necessary for installation of perimeter controls specified in the Contract Documents.
- (b) Construction of perimeter controls specified in the Contract Documents.
- (c) Remaining clearing and grubbing.
- (d) Roadway grading (including off-site work).
- (e) If applicable, utility installation and whether storm drains shall be used or blocked after construction.
- (f) Final grading, landscaping, and stabilization.
- (g) Removal of perimeter controls.

No work shall be started, on-site or off-site until the Erosion and Sediment Control schedules and methods of operation have been accepted by the Administration and MDE.

**308.03.05 Preconstruction Conference.** At the Preconstruction Conference, the Contractor shall present a general overview of how erosion and sediment control measures will be implemented on the project.

**308.03.06 Meetings.** At least seven working days prior to the start of work, the Engineer will initiate and conduct an Erosion and Sediment Control Field Meeting. The meeting shall be attended by the ESCM, and representatives of the Administration and MDE.

In addition to the initial Erosion and Sediment Control Field Meeting, periodic in-field Erosion and Sediment Control Meetings will be held to review and evaluate the effectiveness of measures already installed, and to plan for the implementation of necessary controls proposed for succeeding areas of soil disturbance.

**308.03.07 Initial Controls.** All perimeter controls such as silt fence, earth dikes/swales, check dams, traps, basins, etc., shall be installed prior to the grubbing operation. Typically no controls are required during the clearing operation.

If the Engineer determines that the clearing area has been disturbed and a potential for sediment runoff or erosion exists, the Engineer will direct the Contractor to install the controls at that time.

**308.03.08 Stabilization Requirements.** Areas flatter than 3:1 and stockpile areas shall be permanently or temporarily stabilized as soon as possible, but not later than fourteen days after grubbing and grading activities have ceased in the area. Trap embankments and slopes, earth dikes, temporary swales, perimeter dike/swales, ditches, and slopes 3:1 or steeper shall be permanently or temporarily stabilized as soon as possible, but not later than seven days after grubbing and grading activities have ceased in the area. The seven and fourteen day requirements mean that the stabilization operation is complete within the applicable seven or fourteen day time frame.

When the excavation or embankment reaches the bottom of the subgrade, those areas in which paving will be placed are exempt from the stabilization requirements. Areas between temporary berms, except median areas, need not be stabilized during incremental stabilization. When permanently stabilized areas are disturbed by the Contractor's grading operation or other activities not specifically approved by the Engineer, the restabilization will be at no additional cost to the Administration. Stabilization requirements may be reduced to less than seven days for sensitive areas. Maintenance shall be performed as necessary to ensure continued stabilization.

All slopes shall be tracked within five days of establishment with cleated type equipment operating perpendicular to the slope.

**308.03.09 Maintenance.** All erosion and sediment control devices shall be maintained during the construction season, the winter months, and other times when the project is shut down. Access shall be maintained to all erosion and sediment controls until the controls are removed. Lack of maintenance by the Contractor will be considered as noncompliance with the E & S Plan and grounds for a shutdown of the project.

Controls shall be inspected immediately following storm events. The Contractor shall repair controls when damaged and clean out controls as necessary as the first order of business after a storm event.

Any pumping activity, including dewatering sediment traps and basins, shall be directed through a dewatering device approved by MDE.

**308.03.10 Waste Areas.** Off-site waste areas on State or Federal property require MDE approval. All other off-site waste areas shall be approved by the appropriate Soil Conservation District for each county or the Baltimore City Department of Public Works. All waste areas and stockpile areas shall be protected by erosion and sediment control measures and stabilized within the seven or fourteen day stabilization requirement.

**308.03.11 MDE Inspections.** MDE will conduct frequent field inspections relative to erosion and sediment control compliance. If they determine that noncompliance with erosion and sediment control provisions are found, their representative will immediately notify the Engineer relative to corrective action. This corrective action may require a shutdown of construction activities until the noncompliance is satisfactorily corrected, and no claims against the Administration will be considered due to a shutdown of the grading operations or the entire project.

**308.03.12 Side or Berm Ditches and Culverts.** As a first order of work, the Contractor shall construct the side ditches in fill areas and berm ditches in cuts including lining. These linings shall be protected from sediment deposits. Silt fence shall be placed along the banks of existing streams as shown in the Contract Documents prior to any culverts being placed. To avoid sedimentation during the construction of culverts, the streams shall be diverted around the location of the culvert until the proposed culvert and channel have been stabilized.

**308.03.13 Removal of Controls.** No erosion and sediment control measures shall be removed until all previously disturbed areas are vegetated with a minimum 3 in. growth of grass, and the removal has been approved by the Engineer and MDE. The sediment controls shall be backfilled, graded, and stabilized as specified in the Contract Documents.

All control devices shall be removed, except where an attempt to remove a particular control may severely disturb an area that has been stabilized. When a sediment trap or stone outlet structure is placed at the bottom of a fill greater than 8 ft, the controls may be left in place as determined by the Engineer. Sediment traps left in place shall be stabilized by placing soil stabilization matting over a permanent seed mix.

**308.03.14 Erosion And Sediment Control Original Excavation.** The Contractor shall excavate, construct embankments, grade, and backfill for sediment traps, sediment basins, and other sediment controls as specified in the Contract Documents, or as directed by the Engineer.

Excavation and embankments shall be to the dimensions for each sediment control as specified in the Contract Documents. Excavated material shall be stockpiled and used for backfill when the sediment controls are removed.

**308.03.15 Erosion and Sediment Control Cleanout Excavation.** The Contractor shall remove accumulated sediment from sediment controls or other areas during routine maintenance of sediment controls, or as directed by the Engineer.



Sediment traps shall be cleaned out as necessary to have a minimum of 50 percent of the wet storage capacity available at all times. Riprap outlet sediment traps shall have at least 75 percent of the wet storage capacity available at all times. Silt fence, super silt fence, stone outlet structures, stone check dams, and straw bales shall have sediment removed when it reaches 50 percent of the height of the control device.

Sediment removed from control devices shall be placed in an approved waste site either on or off the project. Material stored on-site may be reused once it is dried and it conforms to Administration requirements for embankment.

**308.03.16 Earth Dike.** Stabilization using sod is prohibited.

**308.03.17 Temporary Swale.** Stabilization using sod is prohibited.

**308.03.18 Perimeter Dike Swale.** Stabilization using sod is prohibited.

**308.03.19 Pipe Slope Drain.** Interceptor berms shall be constructed to direct flow into the flared end section when slope drains are placed on grade. The geotextile apron shall be keyed into a 4 X 4 in. trench.

**308.03.20 Riprap Inflow Protection.** Gabions are prohibited.

**308.03.21 Gabion Inflow Protection.** Construction shall be in conformance with Section 313.

**308.03.22 Stone Check Dam.** Spacing shall be as specified in the Contract Documents or as directed by the Engineer.

**308.03.23 Sediment Traps.** Sediment traps shall be located and excavated to the length, width, and depth as specified in the Contract Documents. In areas of limited right-of-way, cut side slopes shall be as steep as soil conditions will allow.

At sites where infiltration devices are used for the control of storm water, every precaution shall be taken to prevent runoff from unstabilized areas from entering the infiltration devices during construction. Sediment control devices placed in infiltration areas shall have bottom elevations at least 2 ft higher than the finish grade bottom elevation of the infiltration device. When converting a sediment trap to an infiltration device, all accumulated sediment shall be removed and disposed of prior to final grading of the device.

When grading and paving operations have been completed and vegetation has been established on the slopes and channels to the satisfaction of the Engineer, the sediment traps shall be refilled with

suitable materials, shaped, and treated as specified in the Contract Documents, or as directed by the Engineer.

**308.03.24 Stone Outlet Structure.** The area beneath stone outlet structures shall be stabilized immediately after the removal of stone outlet structures.

**308.03.25 Removable Pumping Station.** The Contractor shall furnish the required standpipe, pump, hoses, and connections necessary to adequately dewater the site for construction activities. A pit shall be excavated to the dimensions required to construct the removable pumping station.

**308.03.26 Sump Pit.** The Contractor shall furnish the required standpipe, pump, hoses, and connections necessary to adequately dewater the site for construction activities. A pit shall be excavated to the dimensions required to construct the sump pit.

**308.03.27 Portable Sediment Tank.** The Contractor shall furnish the required pipe, pump, hoses, and connections necessary to adequately dewater the site for construction activities. The dimensions of the portable sediment tank shall be determined by the Contractor to provide the required storage volume per pump discharge.

**308.03.28 Silt Fence.** The geotextile shall be trenched a minimum of 8 in. into the ground and extend a minimum of 22 in. above ground.

Silt fence shall be removed and reset when and as directed by the Engineer. All of the requirements for the original placement of the silt fence shall be strictly adhered to when the fence is reset.

**308.03.29 Inlet Protection.** Inlet protection shall consist of the construction of standard inlet protection, at grade inlet protection, curb inlet protection, or median inlet protection.

**308.03.30 Stabilized Construction Entrance.** Stabilized construction entrances shall be located as specified in the Contract Documents or as directed by the Engineer.

Rehabilitate stabilized construction entrance shall consist of periodic top dressing with additional aggregate, replacement of pipe, or other repairs to the entrance and sediment trapping devices as needed or as directed by the Engineer.

**308.03.31 Super Silt Fence.** The construction requirements for the placement of the chain link fence shall be as specified in 607.03 with the following exceptions:

- (a) Drive anchors shall be used when and as directed by the Engineer.
- (b) The lower tension wire, brace and truss rods, post caps, 1 in. ground clearance, and concrete footings shall not be used.

Geotextile shall be embedded a minimum of 8 in. into the ground and extend a minimum of 33 in. above ground.

Super silt fence shall be removed and reset when and as directed by the Engineer. All of the requirements for the original placement of the super silt fence shall be strictly adhered to when the fence is reset.

**308.03.32 Temporary Asphalt Berm.** When a storm drain system outfall is directed to a sediment trap, or sediment basin, and the system is to be used for temporarily conveying sediment laden water, all storm drain inlets in nonsump areas shall have temporary asphalt berms constructed as directed by the Engineer at the time of base paving to direct gutter flow into the inlets to avoid surcharging and overflow of inlets in sump areas.

**308.03.33 Straw Bales For Sediment Control.** Straw bales shall be used for temporary control of erosion and sedimentation in side ditches or where the placement of a stone outlet structure is not practical. The use of straw bales in median ditches is prohibited.

Straw bales shall consist of undecayed firmly packed straw, approximate size 14 x 18 x 36 in. as prepared by a standard baling machine, and firmly bound by at least two separate circuits of rope or band material which will withstand weathering for the length of time the bale is functioning as a sediment control device. Binding tension on the baling machine shall be sufficient to produce a bale with voids no greater than the nominal thickness of the straw. The bales shall be embedded in soil to a depth of not less than 4 in. and shall be secured in place with two No. 4 reinforcement bars, steel pickets, or 2 x 2 in. wood stakes, 36 in. length. The bales shall be secured by locating the anchoring devices at approximate third points along the longitudinal center line of each bale and driving the anchoring device through the bale and into the ground to a depth of 1 to 1.5 ft.

**308.03.34 Stone for Sediment Control.** The Contractor shall place No. 57 stone, 3/4 to 1-1/2 in. stone, 2 to 3 in. stone, 4 to 7 in. stone, and riprap for sediment control as specified in the Contract Documents or as directed by the Engineer.

**308.03.35 Maintenance Of Stream Flow.** During all operations, the Contractor shall maintain the continuous flow of waterways for the locations indicated in the Contract Documents.

Upon completion of construction, and after temporary drainage devices have served their purpose, the devices shall be removed and disposed of in a manner acceptable to the Engineer.

When the Contract Documents include details for the continuous maintenance of stream flow during construction, a Temporary Stream Crossing Permit will not be required if the Contractor uses the Contract Documents and does no other work in the waterways. The Contractor may develop a different plan for maintenance of stream flow, but approval from the Engineer and a Temporary Stream Crossing Permit will be required in these cases. A Temporary Stream Crossing Permit may be obtained by the Contractor from the Maryland Department of the Environment - Water Management Administration, Permits Services Center.

The application for the permit shall include the following items:

**(a) Permit Requirements.**

- (1) Sequence of construction phases such as channel and structure excavation, structure and embankment construction.
- (2) Equipment crossings and storage areas.
- (3) Methods of maintaining stream flow.
- (4) Control of dewatering discharges.
- (5) Control of runoff for various phases preceding permanent stabilization.
- (6) Methods for controlling erosion and siltation of the waterway.

The Notice To Proceed with construction on the structures at the waterway will not be issued until all the necessary permits are approved and received.

The Contractor is alerted that the special conditions contained in the permit will control the time construction activity will be permitted in the stream.

The discharge of sediment laden water from newly excavated areas directly into the waterways is prohibited.

**(b) Conditions.** To minimize the effects of discharges of dredged or fill material, the following provisions required by the Department of the Army Nationwide Permit shall be adhered to:

- (1) That the discharge will not be located in the proximity of a public water supply intake.
- (2) That the discharges will not destroy a threatened or endangered species as identified under the Endangered Species Act, or destroy or adversely modify the critical habitat of these species. In the case of Federal agencies, it is their responsibility to review its activities to determine if the action may affect any listed species or critical habitat. If so, the Federal agency will consult with the Fish and Wildlife Service and the National Marine Fisheries Service.
- (3) That the discharge will consist of suitable material free from toxic pollutants in toxic amounts.
- (4) That the fill created by the discharge will be properly maintained to prevent erosion and nonpoint sources of pollutants.
- (5) That the discharge will not occur in a component of the National Wild and Scenic River System.
- (6) That the Management Practices listed herein shall be followed to the maximum extent practicable.

**(c) Management Practices.**

- (1) Discharges of dredged or fill material into waters of the United States shall be avoided or minimized through the use of other practical alternatives.
- (2) Direct discharge in spawning areas during spawning seasons are forbidden.
- (3) Discharges shall not restrict or impede the movement of aquatic species indigenous to the waters or the passage of normal or expected high water flows or cause the relocation of the water (unless the primary purpose of the fill is to impound waters).

- (4) If the discharge creates an impoundment of water, adverse impacts on the aquatic system caused by the accelerated passage of water or the restriction of its flow shall be minimized.
- (5) Discharges in wetlands shall be avoided.
- (6) When working in wetlands heavy equipment shall be placed on mats.
- (7) Discharges into breeding and nesting areas for migratory waterfowl shall be avoided.
- (8) All temporary fills shall be removed in their entirety.

**308.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The maintenance, repair, resetting, and final removal of all erosion and sediment control devices will not be measured, but the cost will be incidental to the Contract price to construct the device unless otherwise specified in the Contract Documents.

**308.04.01** Erosion and sediment control manager will not be measured but the cost will be incidental to Erosion and Sediment Control items specified in the Contract Documents.

**308.04.02** The implementation of the Erosion and Sediment Control Plan by the Contractor will not be measured but the cost will be incidental to the Erosion and Sediment Control items specified in the Contract Documents.

**308.04.03** Erosion and Sediment Control Original Excavation will be measured and paid for at the Contract unit price per cubic yard. The payment will also include excavation, backfill, and grading.

**308.04.04** Erosion and Sediment Control Cleanout Excavation will be measured and paid for at the Contract unit price per cubic yard. The payment will also include excavation and disposal.

**308.04.05** Earth Dikes will be measured and paid for at the Contract unit price per linear foot. When 4 to 7 in. stone, temporary seeding, and soil stabilization matting are required, they will be measured and paid for as specified in 308.04.25, 704.04, and 709.04, respectively.

**308.04.06** Temporary Swales will be measured and paid for at the Contract unit price per linear foot. When 4 to 7 in. stone, temporary

seeding, and soil stabilization matting are required, they will be measured and paid for as specified in 308.04.25, 704.04, and 709.04, respectively.

**308.04.07** Perimeter Dike/Swales will be measured and paid for at the Contract unit price per linear foot. When temporary seeding and soil stabilization matting are required, they will be measured and paid for as specified in 704.04 and 709.04, respectively.

**308.04.08** Pipe Slope Drain will be measured and paid for at the Contract unit price per linear foot. The payment will also include excavation, backfill, flared end section, geotextile, anchors, coupling bands, and pipe elbows.

Outlet protection will be measured and paid for as specified in 308.04.25.

**308.04.09** Riprap inflow protection as specified in 308.04.25.

**308.04.10** Gabion inflow protection as specified in 313.04.

**308.04.11** Stone check dam will be measured and paid for at the Contract price as specified in 308.04.25.

**308.04.12** Sediment traps will be measured and paid for at the Contract unit price for one or more of the items listed below:

- (a) Erosion and Sediment Control Original Excavation as specified in 308.04.04.
- (b) Corrugated Metal Pipe per linear foot.
- (c) Polyvinyl Chloride Pipe per linear foot.
- (d) Stone as specified in 308.04.25.
- (e) Inflow protection as specified in 308.04.09 and 308.04.10.

**308.04.13** Stone outlet structure will be measured and paid for as specified in 308.04.25. The baffle board and stakes will not be measured but the cost will be incidental to the Contract price.

**308.04.14** Removable Pumping Station will be measured and paid for at the Contract unit price per each. The payment will also include excavation, pipe, geotextile, wire mesh, steel plate, hose, pump, and connections.

No. 57 stone will be measured and paid for as specified in 308.04.25.

**308.04.15** Sump Pit will be measured and paid for at the Contract unit price per each. The payment will also include excavation, pipe, geotextile, wire mesh, steel plate, hose, pump, and connections.

No. 57 stone will be measured and paid for as specified in 308.04.25.

**308.04.16** Portable Sediment Tank will be measured and paid for at the Contract unit price per each. The payment will also include pipe, geotextile, wire mesh, steel plate, hose, pump, and connections.

**308.04.17** Silt Fence will be measured and paid for at the Contract unit price per linear foot.

**308.04.18** Remove and Reset Silt Fence will be measured and paid for at the Contract unit price per linear foot.

**308.04.19** Inlet Protection will be measured and paid for at the Contract unit price per each.

**308.04.20** Stabilized Construction Entrance and Rehabilitate Stabilized Construction Entrance will be measured and paid for at the Contract unit price per ton. When pipe is required, it will not be measured but the cost will be incidental to the Contract price.

**308.04.21** Super Silt Fence will be measured and paid for at the Contract unit price per linear foot.

**308.04.22** Remove and Reset Super Silt Fence will be measured and paid for at the Contract unit price per linear foot.

**308.04.23** Temporary asphalt berm will be measured and paid for at the Contract unit price per ton of Hot Mix Asphalt. The removal of the temporary asphalt berm will not be measured but the cost will be incidental to the Contract price.

**308.04.24** Straw Bales will be measured and paid for at the Contract unit price per linear foot measured along the approximate center line of the row of bales. Excavation and anchoring the straw bales will not be measured but the cost will be incidental to the Contract price.

**308.04.25** Stone for sediment control will be measured and paid for at the Contract unit price per ton for the pertinent Stone for Sediment Control item. Geotextile, excavation, and backfill will not be measured but the cost will be incidental to the Contract price.

**308.04.26** Maintenance of Stream Flow will not be measured but will be paid for at the Contract lump sum price. The payment will also include



diversion structures, sandbags, polyethylene sheeting, diversion pipes, pumps, hoses, and connections.

**308.04.27** Temporary Wood Cellulose Mulch will be measured and paid for as specified in 704.04.02.

**308.04.28** Temporary Seeding will be measured and paid for as specified in 704.04.01.

**308.04.29** Seeding Roadside Areas will be measured and paid for as specified in 705.04.01.

**308.04.30** Seeding Median Areas will be measured and paid for as specified in 705.04.02.

**308.04.31** Overseeding Roadside Areas will be measured and paid for as specified in 705.04.05.

**308.04.32** Overseeding Median Areas will be measured and paid for as specified in 705.04.06.

**308.04.33** Sodding will be measured and paid for as specified in 708.04.01.

**308.04.34** Temporary earth berms and interceptor berms for incremental stabilization will not be measured, but the cost will be incidental to the excavation items specified in the Contract Documents.

## SECTION 309 — CONCRETE DITCHES

**309.01 DESCRIPTION.** This work shall consist of constructing concrete ditches and incidental toe walls as specified in the Contract Documents or as directed by the Engineer.

### 309.02 MATERIALS.

Crusher Run Aggregate CR-6	901.01
No. 57 Aggregate	901.01
Curing Materials	902.07
Form Release Compounds	902.08
Concrete Mix No. 2	902.10
Joint Sealer	911.01
Preformed Joint Filler	911.02
Borrow	916
Soil Stabilization Matting	920.06